Not All Alien Invaders Are From Outer Space . . .

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Spiny Water Flea
Bythotrephes cederstroemi

Spiny Water Flea, *Bythotrephes cederstroemi*

The spiny water flea isn't really a flea at all. It is a tiny crustacean distantly related to shrimp, lobster, and crayfish. This native of Europe first appeared in North America in Lake Huron in 1984. Three years later, it could be found in all five Great Lakes.

Scientists believe that the spiny water flea was brought over by a transoceanic ship, trapped in the ship's ballast tanks. When a cargo ship leaves the United States bound for overseas, it drops off its cargo but doesn't always pick up new cargo for the trip home. Because there is no new cargo weighing the ship down and providing stability in the water, the ship must fill special tanks with seawater to supply needed ballast. Back home, the ship empties its ballast tanks when new cargo is loaded. The problem is that sometimes ships suck up exotic sea life, like spiny water fleas and zebra mussels, when they fill their tanks and then drop that sea life when they dump their ballast water here. This route is believed to be how the spiny water flea came to the United States.

While spiny water fleas aren't really fleas, they are spiny. Each has a tail rimmed with several sharp spikes and barbs. When small fish try to eat these crustaceans, the barbs choke the fish, causing them to spit the spiny water flea back into the water. Fish that have gone through this experience tend to avoid the fleas in the future.

The spiny water flea is very small—only 2/5 inch (12 mm) long as an adult. And that size includes its tail, which makes up at least 70 percent of its length.

Spiny water fleas reproduce rapidly. During the warm summer months, each female can give birth to up to 10 offspring every 2 weeks. Females go on laying eggs in the winter, but the eggs lie dormant until the water warms up the following summer. When it comes to reproduction, the spiny water flea never takes a break.

The threat posed by the spiny water flea is one of the scariest. It is unknown. Scientists studying the effects of the spiny water flea in the Great Lakes have learned that the tiny crustacean, in large numbers, will devour native plankton. The loss of plankton can change a lake's ecosystem and cause other species higher on the food chain to move elsewhere to find new sources of food or even die off. This tiny pest may prove powerful enough to damage the entire food web in America's inland waterways.

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